

FIGURE 1

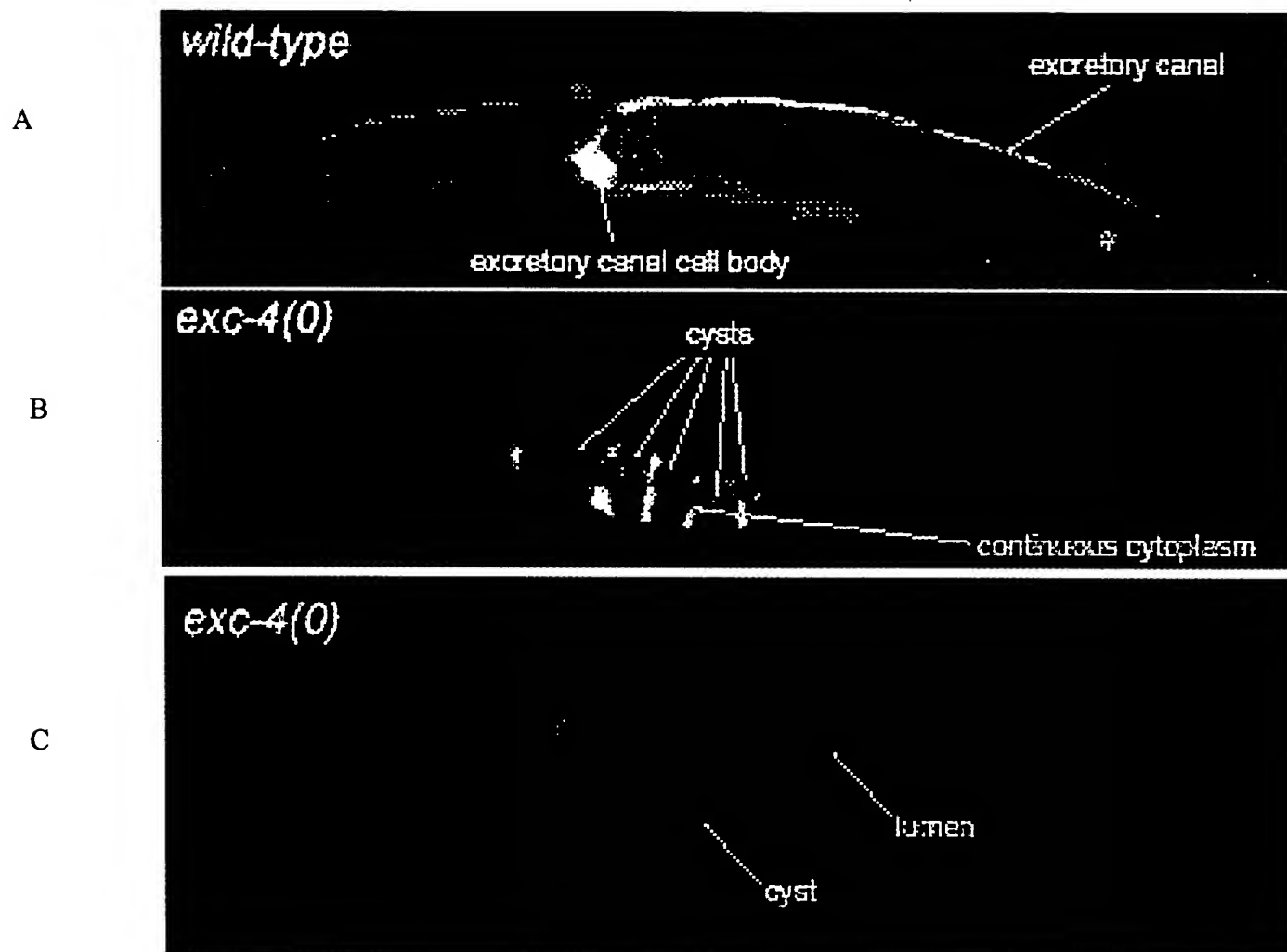


FIGURE 2

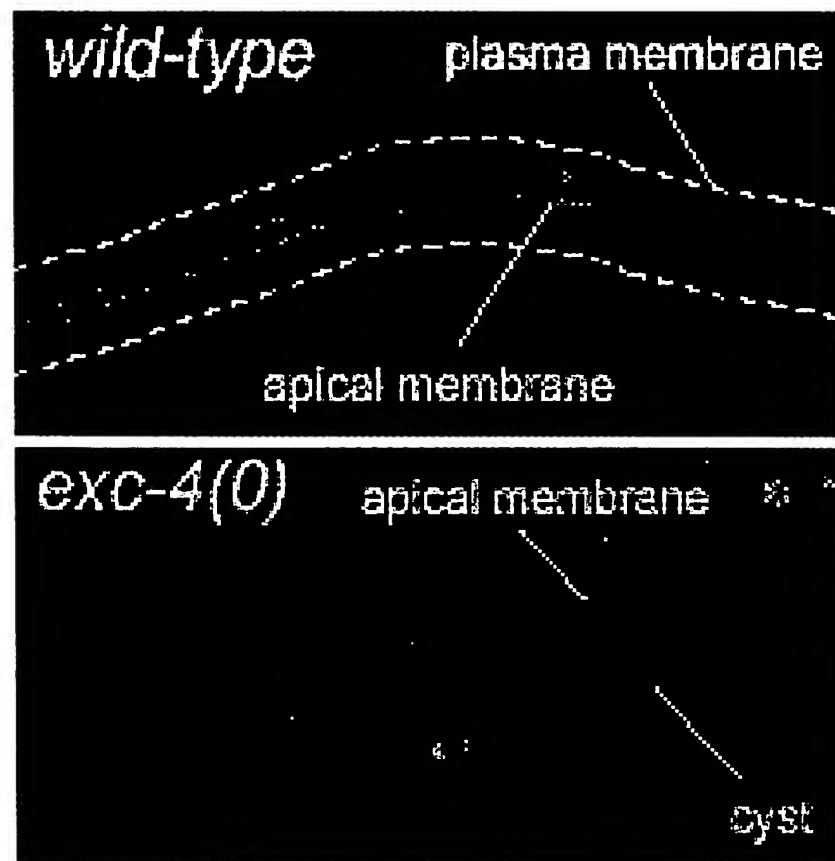


FIGURE 3

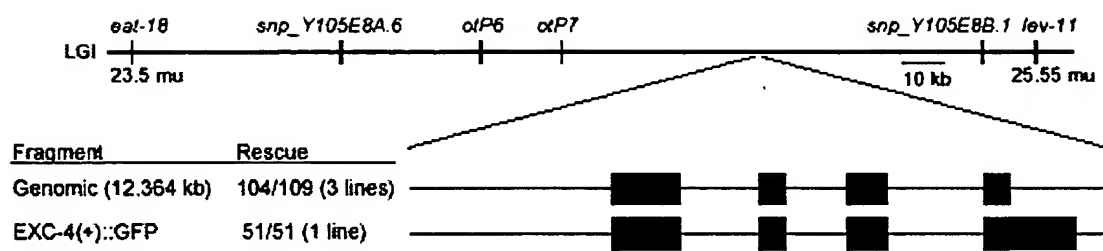


FIGURE 4

#6
 hCLIC5 MZDSATANG---DDSD E LN VKA-GIDBESIGECPPSQRLLP W-KGVVF VTT DL- R PADL RLAF: 8
 hCLIC4 MALSNFLNGLKZEDXZEL LN VKA-GSDGESIGECPPSQRLLP W-KGVVF VTT DL- R PADL RLAF: 71
 hCLIC3 -----KLC VKA-SDGESIGECPPSQRLLP L-KGVVF TT DT- RBP VL DLAF: 29
 hCLIC2 M--SGLRPG---TOVDE LN VKA-GSDGESIGECPPSQRLLP W-KGVVF VTT DM-ER P EL DLAF: 66
 hCLIC1 M-----AZZQF LN VKA-GSDGESIGECPPSQRLLP W-KGVVF VTT DT- R T OKICE: 60
 EXC-4 MAAATQIQSNQDPQSKLL LN VKASGID RRICADLLCQEP E A YE GVARVE RTVNVB AF KNFL: 74
 →rh133 = stop
 hCLIC5 BP FLT NG -- K VNR EPLLET TFE YP AAEHESNYAGID FKH SAYIKK KQOEAALE G:140
 hCLIC4 BP FLS NS -- K VNR EPLLEV CPP VL SPEHESNYAGND FKH SAYIKK RPEAEALE G:143
 hCLIC3 L XL DS --AK TLO FLEET CPP PS AP YRESNYAGND FKH SA IENFVPAC EALYQO:101
 hCLIC2 P FL NK -- K FIK EPLCOT APP YP SPHYMESFDVGC FKH SAYIKK OKKAKKFE S:138
 hCLIC1 G L PL GT -- TFK EPLLEV CPP YP AALHESNYAGLD FKH SAYIKK NPALDNLE G:132
 EXC-4 A P I EKKELTY NRE GR FH-AKEFNVP FEPDS KRIR RE KL AKVEFDKGNKFS:167
 #3
 hCLIC5 LTRALK LDYIK PLE E DAN CG -DKGS R F D DEL LA L K H V V KHYR D AEM G:213
 hCLIC4 LKXLO LDYIK PLE E DEN ME -IKSTR F D NE LA L K H V V KHYR D KEM G:216
 hCLIC3 LL ALA LDYIKAPLE E AGEF--O-LRES R F D DEL LA S L K H V V KHYR D AELG:172
 hCLIC2 LKXFK LDYIK PLE E DFD AG -PFVS RIF D DEL LA S L K LI A KHYR D AEF G:211
 hCLIC1 LKXKVLK YIT PLE E DET AE -EGVSR F D DEL LA S L K H V V KHYR D EAFRC:208
 EXC-4 R EDLPAQIKVHYR C SHID--QLLSER S L NS LY E RE LSLLO D R F R:219
 #1.#2
 hCLIC5 WR LKN YAR E TET AADSEIELA ADVANRI RS-----n561 = stop :251
 hCLIC4 WR LTN YAR E TET PSD E EIA SDVANRI K----- :253
 hCLIC3 WR LOS NQKEE KYT PSBAZHLAA RFAV PR----- :207
 hCLIC2 WR LSN YAR E TET PDKKELNT AEVYQK----- :247
 hCLIC1 WR LSH YAR E AST PDDKZELA EQVYNALX----- :241
 EXC-4 WA LT RTAA IE PADG IIR KEQNELF NQREYLOSTYKTHYIPEKVLSDIRVKG LAPD VVVE:290
 →n2400 = Lau

holo:
 sheet

FIGURE 5

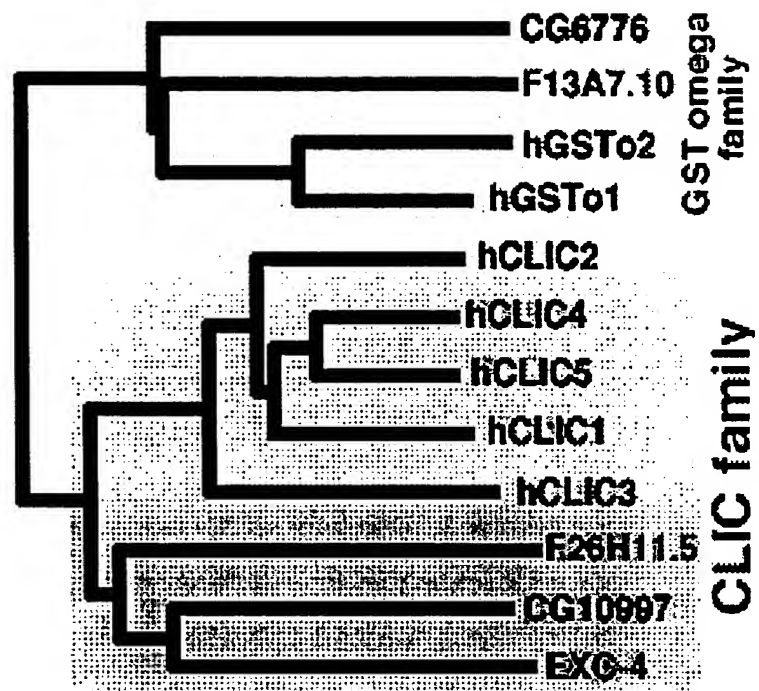


FIGURE 6

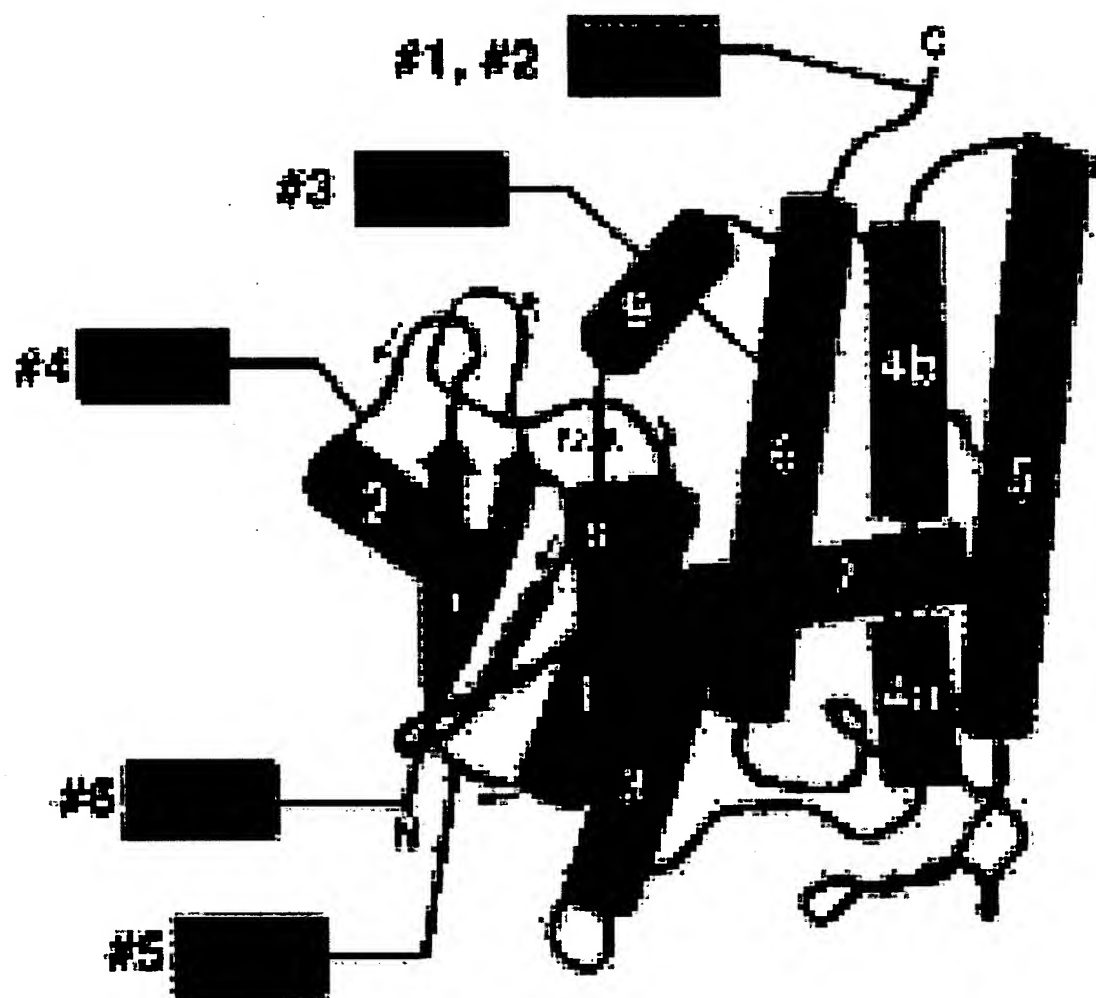


FIGURE 7

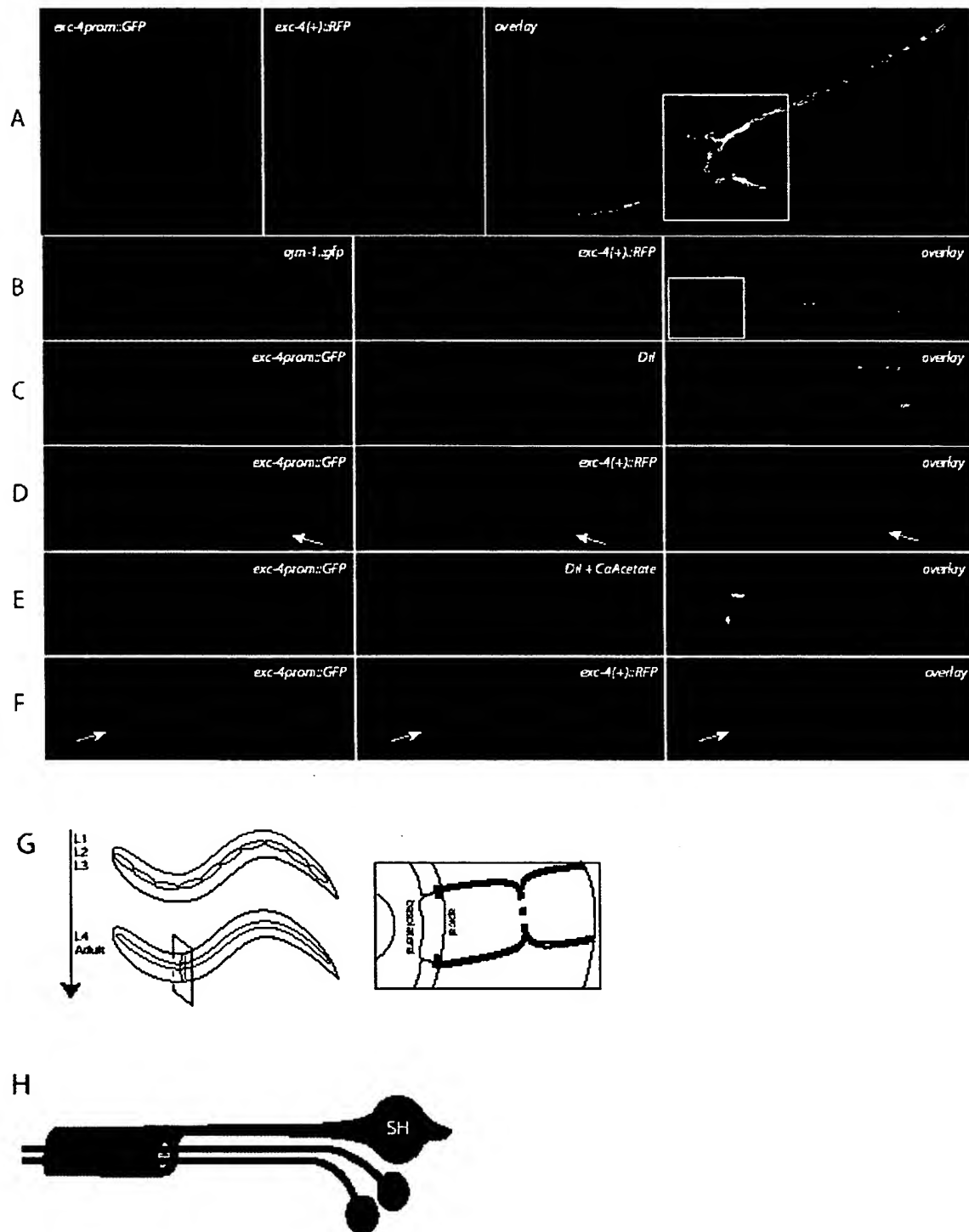








FIGURE 8

A

N	NAME	LOCALIZATION	GFP FUSION CONSTRUCT
#1	<i>exc-4prom::exc-4(+):GFP</i>	apical	
#2	<i>exc-4prom::exc-4(P238L):GFP</i>	cytoplasmic	
#3	<i>exc-4prom::exc-4(R202Stop):GFP</i>	apical	
#4	<i>exc-4prom::exc-4(PTM):GFP</i>	apical	
#5	<i>exc-4prom::exc-4(TTM):GFP</i>	mixed	
#6	<i>exc-4prom::GFP</i>	cytoplasmic	

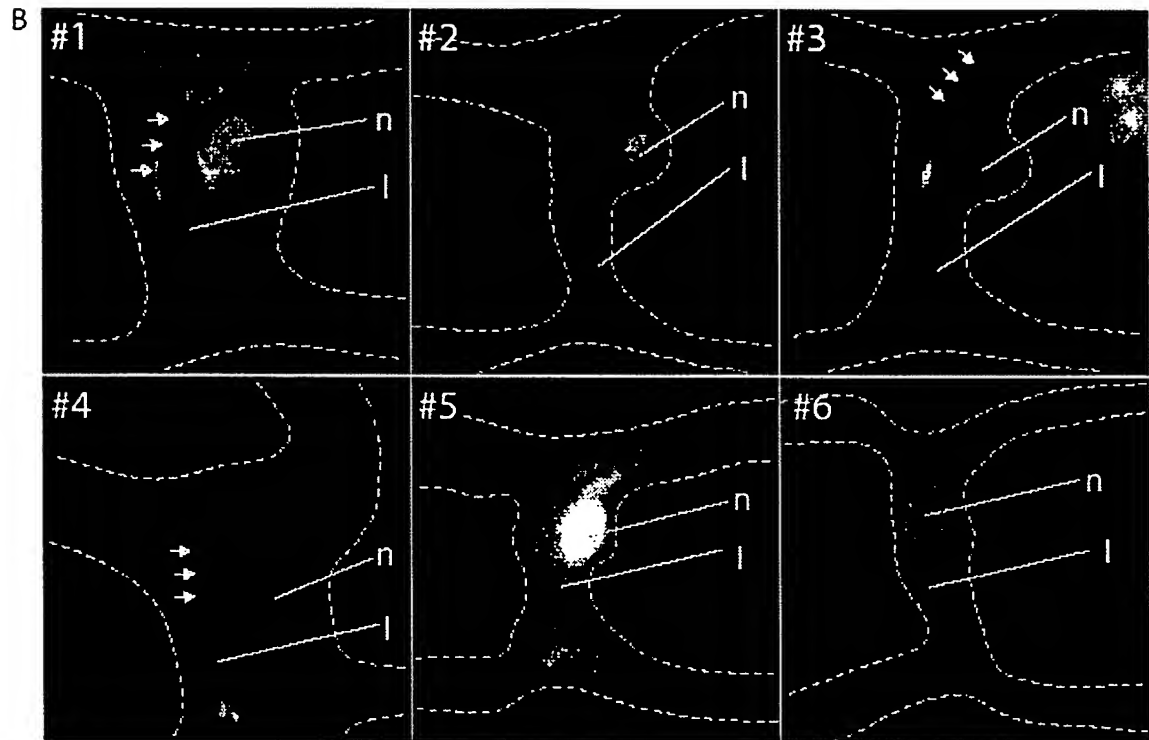


FIGURE 9

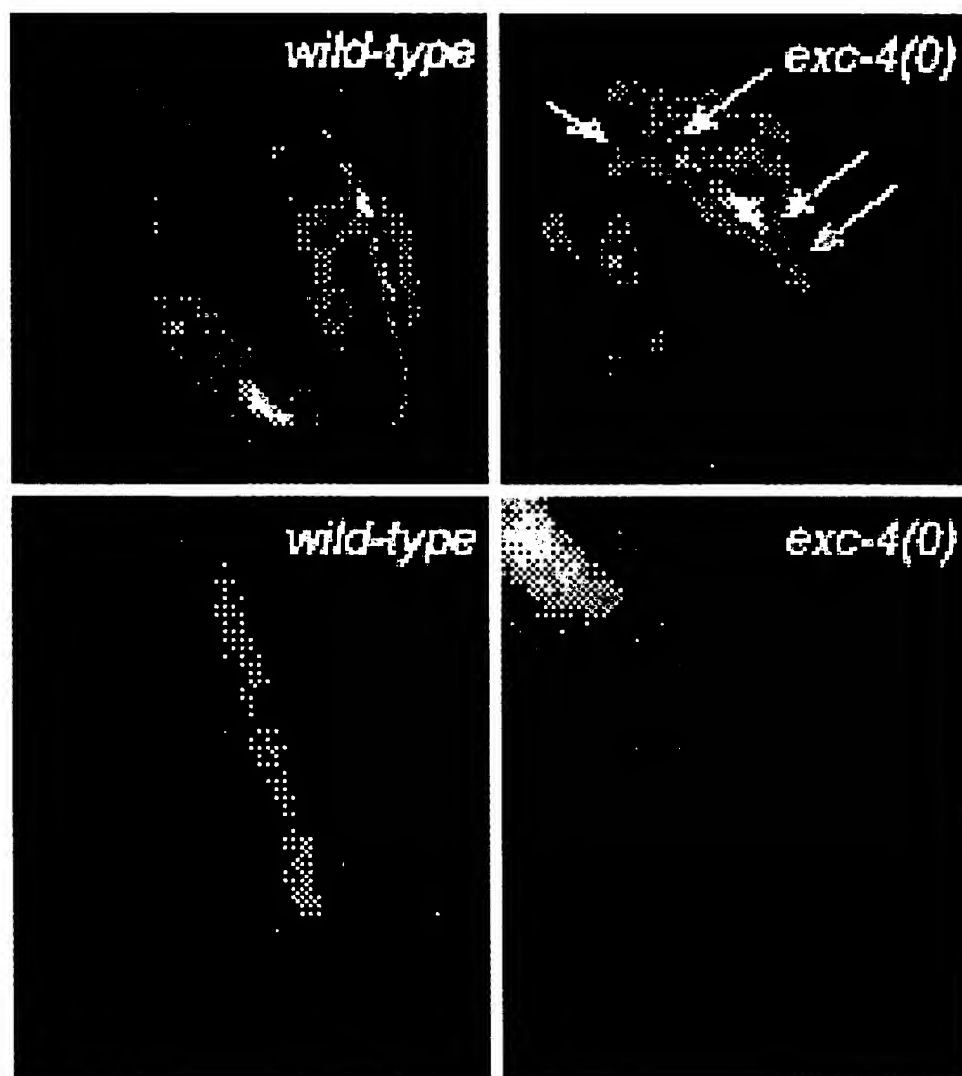


FIGURE 10

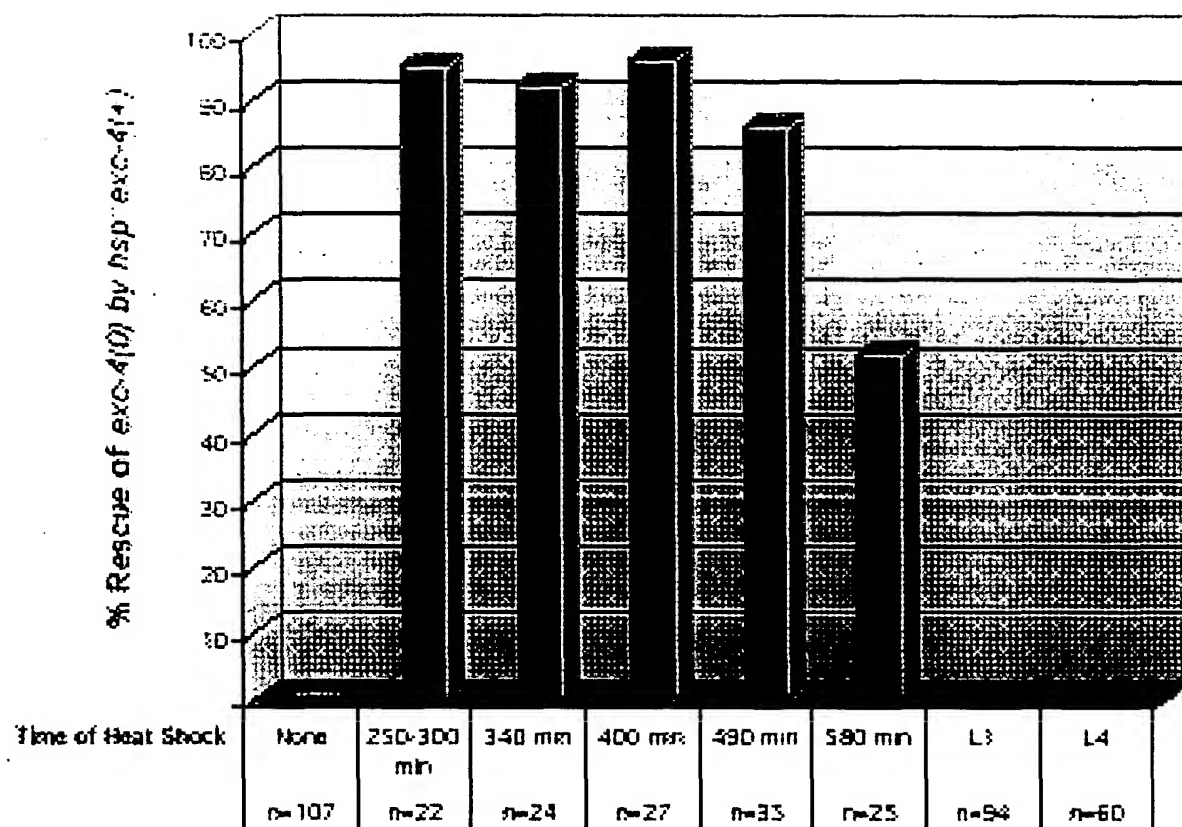


FIGURE 11

Stage	<i>exc-4(+)</i> Embryos				<i>exc-4(+)</i> Larvae				
	400'	480'	500'	550'	0hr	0hr	2hr	4hr	4hr
ER	+	++	+++	+++	++	++	++	+	+
Golgi (GO)	+	++	++	++	+++	+++	+	+	+
Vacuole (TU)	-	++	++	-	-	-	-	-	-
Lumen (TU)	-	-	-	+	++	++	++	++	++
Canaliculi (CI)	-	-	-	+/-	++	++	+++	++	++
ER,GO / TU,CI	NA	5:1	4:1	4:1	1:1	1:1	1:2	1:3	1:4

FIGURE 12

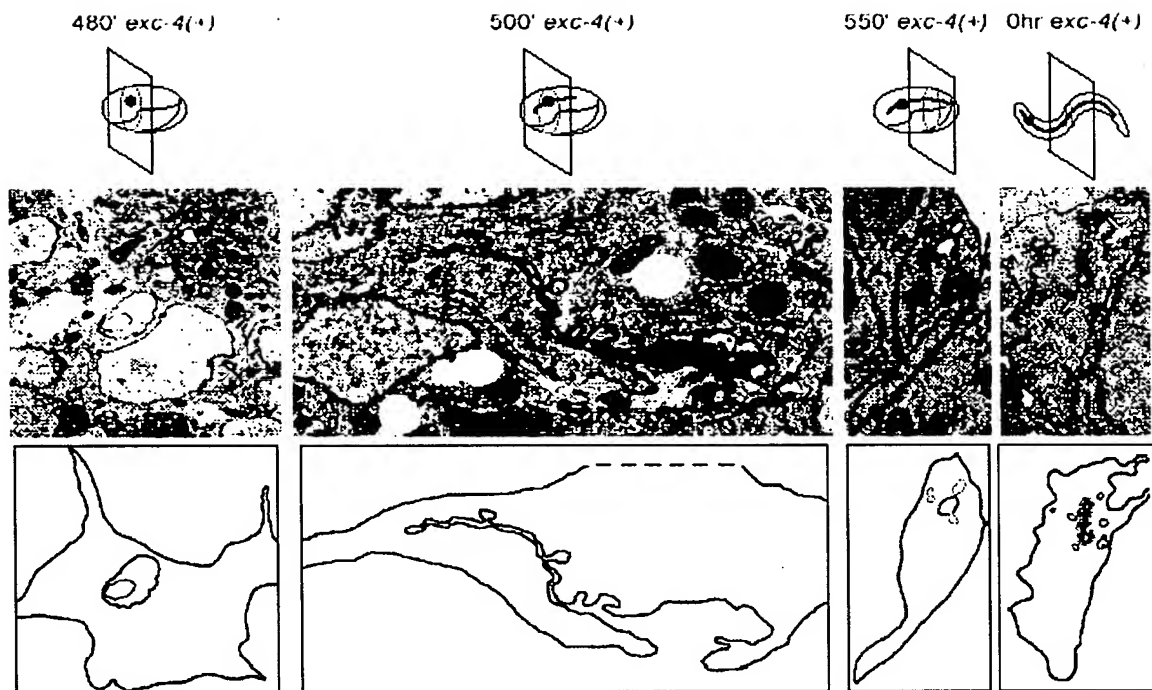
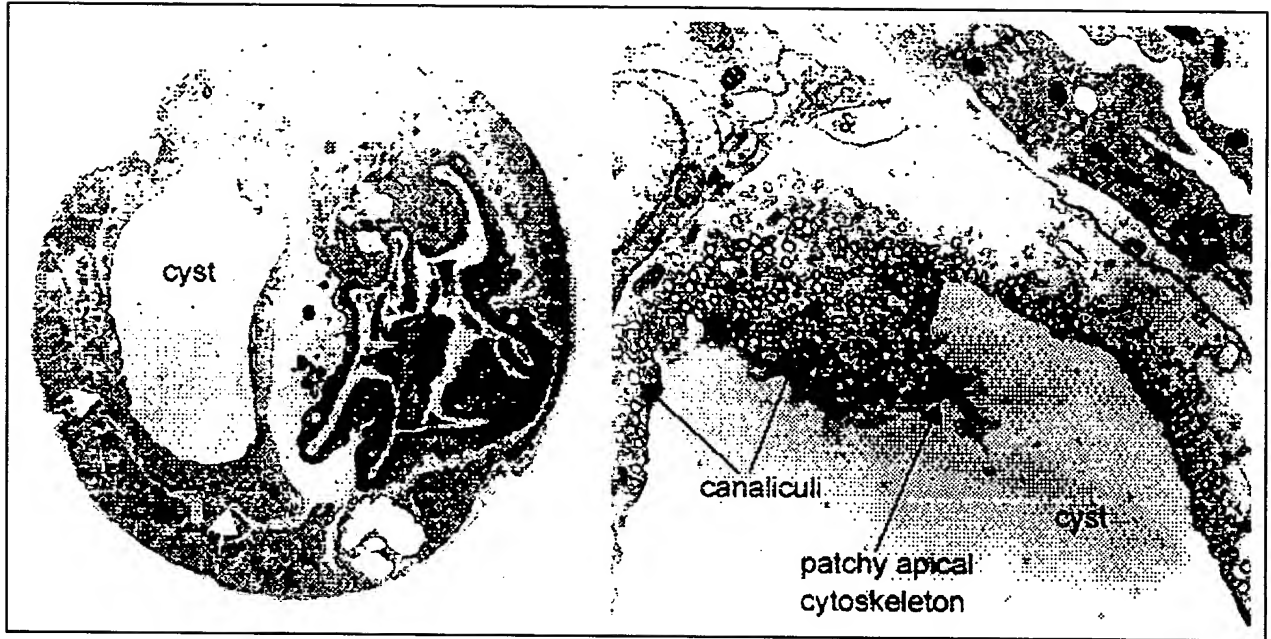


FIGURE 13



A

B

FIGURE 14